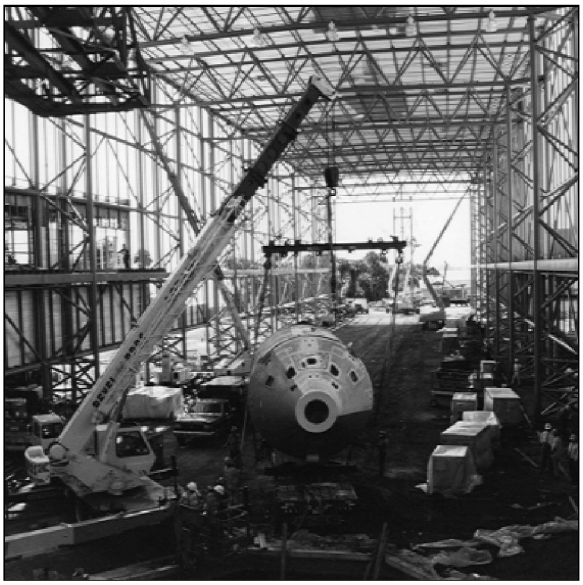
Apollo/Saturn V Center puts national treasure on global stage

EFFORTS began last month to relocate the freshly painted Saturn V launch vehicle and Apollo spacecraft to their new home near Banana Creek. The 363-foot (111-meter) tall rocket has been on display south of the Vehicle Assembly Building since the 1976 U.S. Bicentennial Exposition. The rocket's third stage is being moved in the photo above.

THE S-II second stage of the Saturn V rocket is moved May 4. The 81-foot (25-meter) long stage was built by North American Rockwell. It was powered by five J-2 engines that generated a thrust of more than 1.135 million pounds (514,836 kilograms). The purpose of the stage was to loft the vehicle almost to Earth orbit.

THE LAST element of the Apollo/Saturn V launch vehicle -- the huge first stage -- is moved May 11. Contractor Thomarios Painting Co., Norton, Ohio, carried out the refurbishment and repainting of the launch vehicle prior to the transfer. The first stage, designated as S-IC, was the largest of the stages at 133 feet (41 meters) in length and 33 feet (10 meters) in width.

THE Apollo/Saturn V's command service module is moved to its new location.



THE INTERIOR of the new facility takes shape as elements of the Apollo/Saturn V are brought into the glass-enclosed room where they will be displayed. The 99,000 square foot center will be a world-class interpretive center and hub for KSC tours, highlighting the achievements of the Apollo program.

ALL ELEMENTS of the launch vehicle have completed their journey in this photo taken May 13. In addition to the Apollo/Saturn V launch vehicle and spacecraft, the center will house a Lunar lander, elements of an Apollo pad launch umbilical tower and an authentic representation of a firing room.

A TEAM from the U.S. Army Explosive Ordnance Disposal Unit at Cape Canaveral Air Station sets six charges to be detonated by remote control on the Ocean Test Fixture (OTF). The Liberty Star, which towed the OTF to sea, is in the background.

SECOND LIEUTENANT Christine Burkel and Staff Sergeant Timothy Holland set the explosive charges on the OTF. The plaque honors Tom Hart, an SRB recovery diver who recently passed away. The reef will be named after Hart.

THE CHARGES detonate on the OTF, sinking it in 122 feet of water 22 miles southeast of Port Canaveral.

SRB TRAINER NOW SERVING THE SEA

by Chuck Weirauch

With an ear-splitting blast similar to a Space Shuttle sonic boom, explosive charges sent an obsolete Shuttle solid rocket booster (SRB) recovery training device to the bottom of the Atlantic Ocean recently to become part of the Port Canaveral reef.

The Liberty Star, one of NASA's two SRB recovery ships, towed the 132-foot-long SRB simulator, known as the Ocean Training Fixture (OTF), to the reef location 22 miles southeast of Port Canaveral on April 11.

Once the OTF was in the proper north-south orientation, a team from the U.S. Army Explosive Ordnance Disposal unit at Cape Canaveral Air Station set off six shaped charges to sink the device in 122 feet of water.

However, the OTF did not become a denizen of the deep without some struggle. At first, the 182,000-pound device began to sink horizontally as planned as water rushed into the six gaping holes blown in its sides. Then, capriciously, it went down rapidly by its aft skirt to rest vertically on the bottom. The ten-foot section left protruding from the surface seemed to taunt the crews of the Liberty Star and its sister ship, the Freedom Star.

After rocking back and forth for about 20 minutes in this defiant posture, the aft skirt finally succumbed to the pressures of the swift ocean current and collapsed.

"The OTF is now a major part of an artificial reef that provides an environment to encourage the propagation of marine life," said C. Wayne Ranow, NASA SRB retrieval and disassembly manager. "The state of Florida supports the development of such reefs to improve ocean conditions and provide more habitats for marine organisms."

Ranow coordinated the NASA effort with the Canaveral Port Authority, which had previously sunk four railroad cars to begin the reef in 1994. More outdated space hardware, some from the Apollo program, may soon be added to the Port Canaveral artificial reef project.

The OTF portion of the Cape Canaveral reef is located at a latitude of 28 degrees, 19 minutes north and a longitude of 80 degrees, 12.24 minutes west.

It will appear on navigational charts as the Thomas William Hart Reef, named in honor of an SRB recovery team diver who passed away this year.

A plaque at the front of the OTF serves as a memorial. Several Lockheed Martin Space Operation Company divers who worked with Hart, including David Winston, Jim Saxenmeyer and Greg Fischer, first proposed that the reef be named in his honor and volunteered their time to make the plaque and attach it to the OTF.

The reef will be used by recreational divers and fishermen. It will take about four months for marine life to become established, Ranow said.

"This is a fitting end for the OTF," said Gary Rohrkaste, a Lockheed Martin engineer who originally designed the training device.

"The OTF served as a very valuable tool as an SRB simulator for diver training for many years beyond its original design life of three years. I am happy to see that will serve a useful purpose for recreation and the marine environment."